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PRINCIPAL CONTENTS

FRONTISPIECE: PORTRAIT OF CAPTAIN CHAS. D. BIGSBEE U. S. N.	7308
CUBA: War maps and illustrations.	PROP. ROBERT T. HILL. 193
ORIGIN OF WEST INDIA BIRD LIFE.	PROP. FRANK M. CHAPMAN. 243
TRADE OF THE UNITED STATES WITH CUBA.	THE EDITOR. 247
CAPTAIN CHARLES D. BIGSBEE U. S. N.	HENRY GANNETT. 150

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D. B. Davis

CAPTAIN D. B. DAVIS

THE National Geographic Magazine

VOL. IX

MAY, 1898

No. 5

CUBA

By ROBERT T. HILL,

United States Geological Survey

SITUATION AND GEOGRAPHIC RELATIONS

Cuba is the westernmost and largest of the four islands known as the Great Antilles. These, with the Virgin islands at their eastern end, stretch east and west for over 1,500 miles, and constitute a distinct geographic province—distinct in relief, geologic formation, and history from the other West India islands and the adjacent mainlands.

In their climate and vegetation, as in their topographic features or geologic history, the Antilles have no affinities with conditions with which we are familiar in the United States. Their whole aspect is tropical, yet they possess so many unique individual features, differing from those of other tropical lands, that they belong in a class entirely by themselves. The causes of this individuality are involved in a peculiar geologic history, which can be dwelt upon here only to the extent of stating that it has produced certain peculiarities of configuration and given origin to formations which weather into soils of unusual productivity.

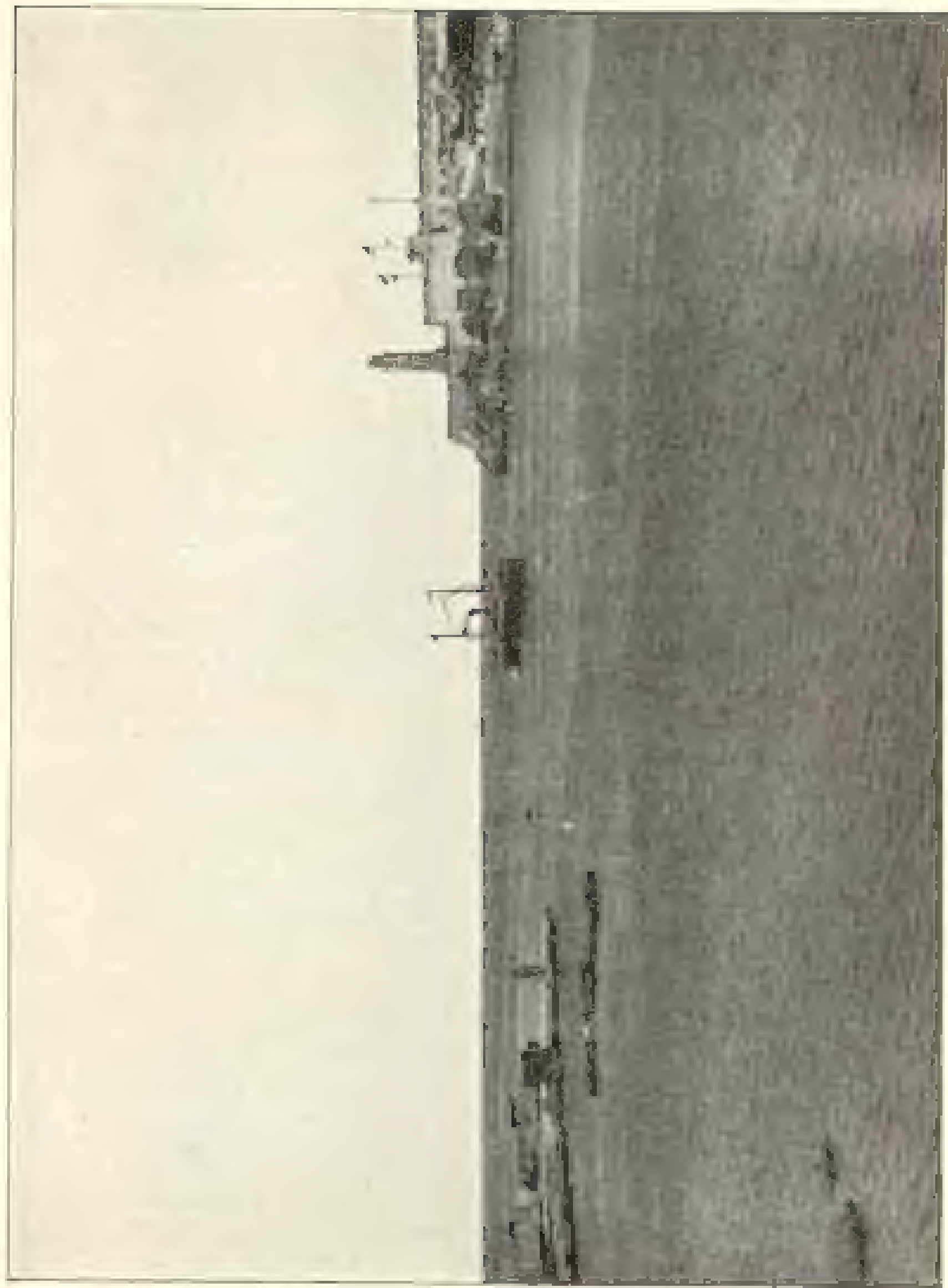
Collectively the Great Antilles consist of a disconnected chain of mountains (the Antillean system) protruding above the sea and having an east-west trend directly transverse to that of the axial continental Cordilleras. The highest peaks of this system in Haiti, Cuba, and Jamaica are 11,000, 9,000, and 7,000 feet respectively. These mountains of deformation are irregularly

flanked below 2,000 feet by horizontal benches or terraces, which are the result of regional elevations and base-leveling after the last period of mountain-making in Miocene time. The Antillean uplift may be compared to an inverted, elongated canoe, the highest and central part of which is in the region adjacent to the Windward passage. Thus it is that the higher peaks occur in Haiti, eastern Cuba, and eastern Jamaica, while the arching crest line descends toward the western part of the two latter islands and, on the east, toward Porto Rico. The higher mountains are composed of non-calcareous clay conglomerate and igneous rock, the debris of unknown lands of pre-Tertiary time, which, with the exception of a few restricted points, were buried, during a profound subsidence in early Tertiary time, beneath a vast accumulation of calcareous oceanic sediments now composing the white limestones which constitute the chief formations of the islands, and which were, together with the preceding formations, elevated into their present position at the close of the Tertiary period.* The mountains above 2,000 feet are composed of the older non-calcareous formations and the bordering plateaus of limestone, resulting in two distinct and contrasting types of soil throughout the Antilles.

STRATIGRAPHIC AND COMMERICAL POSITION

In area, in natural resources, in the number and character of its inhabitants, in position as regards proximity to the American and Mexican seaboards, strategically Cuba is by far the most important of the Great Antilles. It is very near the center of the great American Mediterranean, separating the Gulf of Mexico from the Caribbean sea, and in close proximity to our southern

* The general geology of the island, which was discussed in this article, is well shown in many of the illustrations. It may be briefly stated as consisting of an older basement of pre-Tertiary sedimentary rocks, in which *Crinoids* and probably *Diploids* fossils have been found. Above this there are, first, littoral beds composed of calcareous material, and then a great thickness of white limestones consisting of organically-derived oceanic material, an elongated form and roof rock of late Miocene and Oligocene age. The island was re-elevated from the sea and assumed its present relief by a great mountain-making movement in late Tertiary time, involving the deposition of these limestones. In later epochs, *Pliocene* and *Pleistocene*, the island underwent a series of sporadic subsidence and elevations which affected the coastal borders, producing the water-cut cliffs and a number of elevated rock peaks which border the coast in many places, as can be recognized in the illustrations of the coasts of Habana and Baracoa. So far as its history is known, the island has never been connected with the American mainland, although such has frequently been asserted to be the case. These assertions have been based upon the erroneous identification of certain variegated animal remains. There are no traces in the entire life of Cuba, past or present, which justify this conclusion. Some of the coralline rocks may be ancient, but most of them are post-Tertiary in age.



View from the ship, looking north
The ship is on the right

seaboard, the coast of Mexico, the Bahamas, Haiti, Jamaica, Central America, the Isthmus, and the coast of South America.

The island commands three important maritime gateways: the Straits of Florida, leading from the Atlantic ocean into the Gulf of Mexico; the Windward passage, leading from the Atlantic into the Caribbean sea, and the Yucatan channel, connecting the Caribbean sea and the Gulf. The first and last of these completely command the Gulf of Mexico. It is less than 96½ miles from Key West to the north coast of Cuba. From the east end of the island, Haiti and Jamaica are visible, 51 and 55 miles distant respectively. From the western cape (San Antonio) to Yucatan the distance is 130 miles.

OUTLINE, DIMENSIONS, AND AREA

The outline of the island, commonly compared by the Spaniards to that of a bird's tongue, also resembles a great, hammer-headed shark, the head of which forms the straight, south coast of the east end of the island, while the body extends to the westward in a sinuous curve. This analogy is made still more striking by two long, fin-like strings of cays or islets, which extend backward along the opposite coasts, parallel to the main body of the island.

The longer axis of the island extends from the 74th to the 85th meridian, while its latitude, between 19° 40' and 23° 33', embraces nearly four degrees. Its length, following an axial line drawn through its center from Cape Mayel to Cape San Antonio, is 730 miles. Its width varies from 90 miles in the east to less than 20 miles in the longitude of Habana. Cape Mayel, on the east, lies directly south of New York, while Cape San Antonio is situated south of Chicomulco.

At the outset the reader should dispossess his mind of any preconceived idea that the island of Cuba is in any sense a physical unit. On the contrary, it presents a diversity of topographic, climatic, and cultural features which, as distributed, divide the island into at least three distinct natural provinces, which for convenience may be termed the Eastern, Central, and Western.

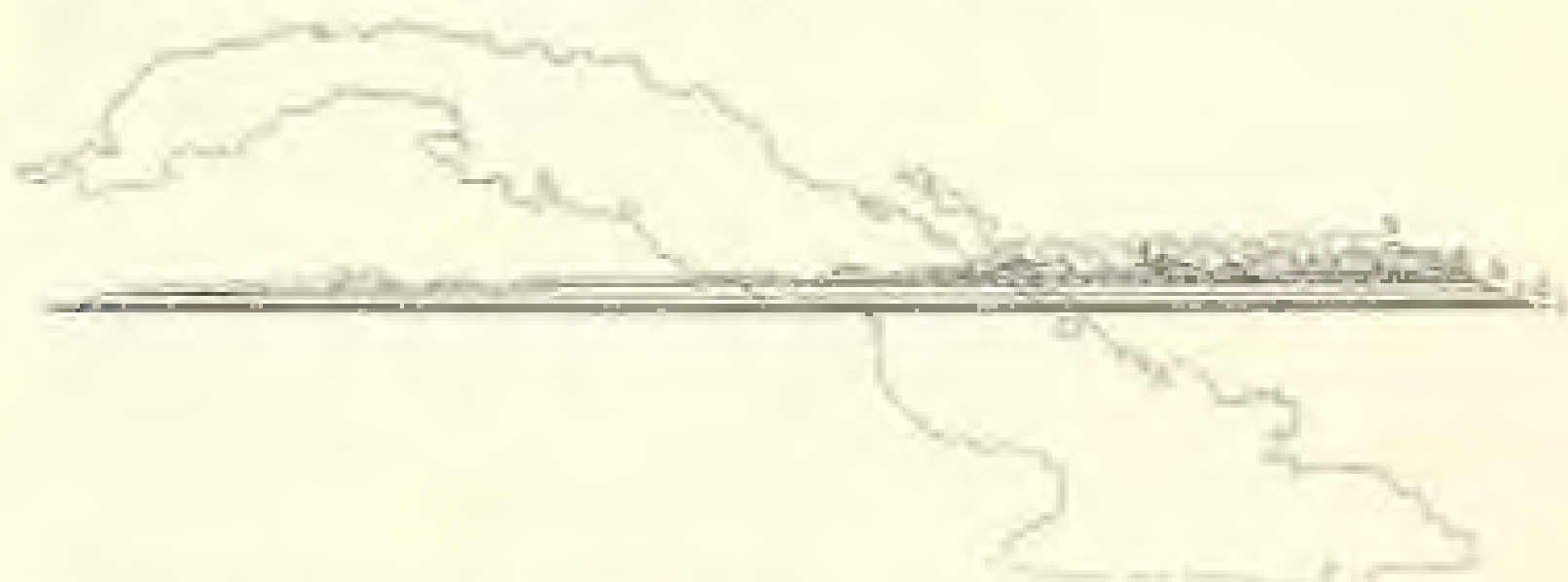
No accurate trigonometric surveys have been made of the island and its bordering islets, including 570 cays adjacent to the north coast and 730 to the south, or of the Isle of Pines, a large and important dependency. Nearly all existing geographic data have been based upon a large map compiled by Pichardo,

engraved in Barcelona, which was a compilation of local surveys of various and doubtful degrees of accuracy.

The area of the main island has been estimated at from 40,000 to 43,000 square miles, that of the Isle of Pines at 1,214, and that of the cays at 1,350. Some of the larger cays, like Romano, are 140 square miles in extent. Reclus estimates the total at 45,881 square miles, an area about equal to that of the state of New York and nearly one-fourth the size of Spain.

CONFIRMATION

The distinct types of relief include regions of high mountains, low hills, dissected plateaus, level plains, intermontane valleys, and coastal swamps. In general, however, with the exception of a strip of the south-central coast, the island as a whole stands

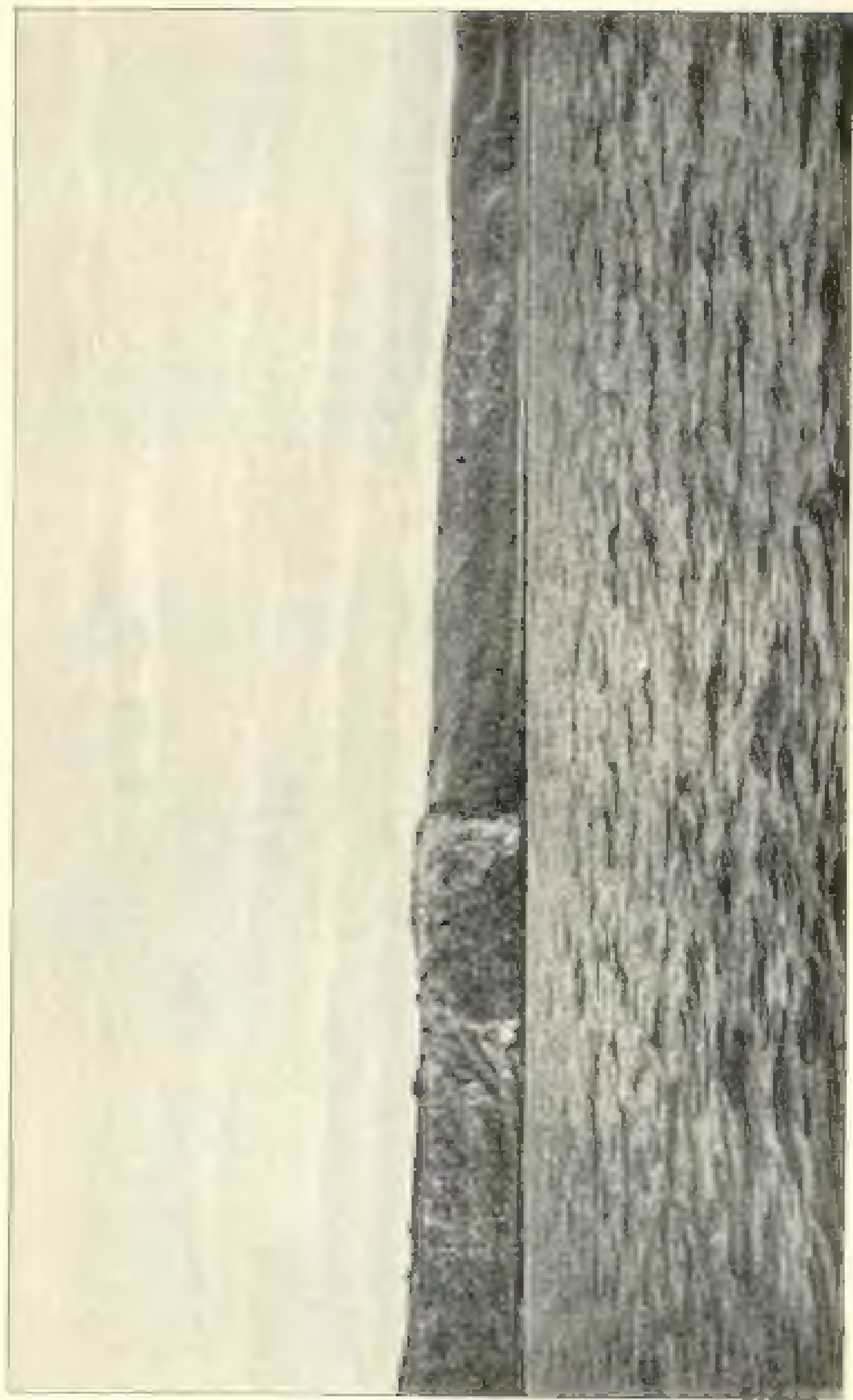


CONFIRMATION.—1. Profile of elevated coast land. 2. Lagoon between bordering the island. 3. Coastal swamps. 4. Older and higher levels. 5. Mountains of deformation.

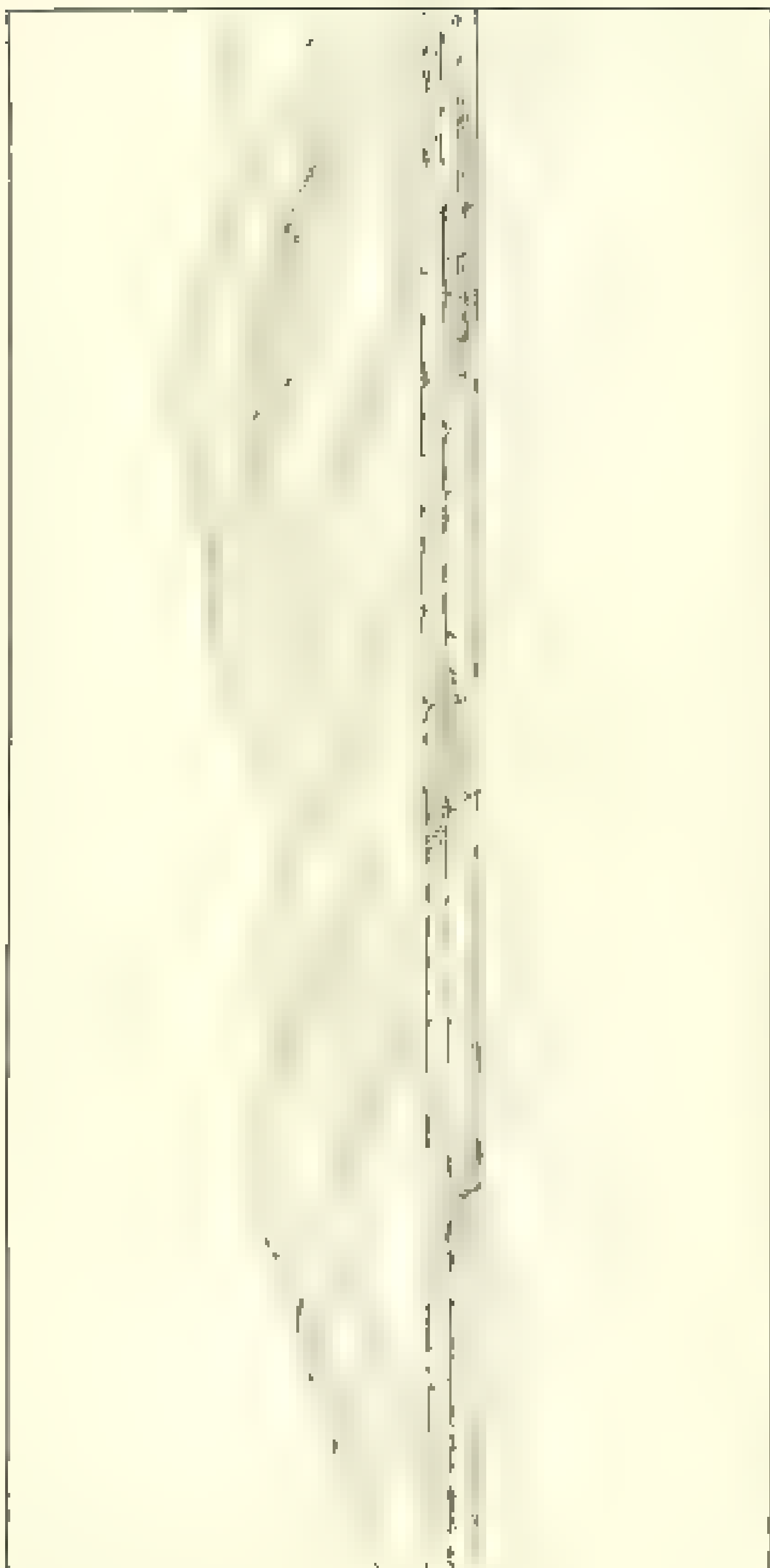
well above the sea, is thoroughly drained, and presents a rugged aspect when viewed from the sea. About one-fourth of the total area is mountainous, three-fifths are rolling plain, valleys, and gentle arable slopes, and the remainder is swampy.

THE COAST

The coast line of Cuba is very extensive, measuring, without its meanderings, nearly 2,200 miles. On Peckard's map the coast line, measured with all its embayments and including the islets, is over 3,800 miles. On all sides except the south-central the coast is abrupt, except where indented by pouch-like harbors, and stands above the sea as if the waters of the latter were rapidly planing away what had once been a more extensive land. In many places the immediate coast line is a narrow bench of elevated reef rock a few yards in width and



ROCKY COASTLINE, WITH WAVES CRASHING AGAINST THE SHORE.



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The composition of these clasts is not consistent in composition as I looked to the island, as you already saw, however, as the composition of the independent and groups, it will be the eastern, western, and central, respectively, the trends of which overlap each other occasionally. The spread of these to the north is probably the same range, known as the Sierra Nevada, which dominates the central part of the coast of San Francisco Bay and I can understand the Piedmont Turp. co. which rises directly from the sea to a height variously estimated at from 4,000 to 5,000 feet. In San Pedro in this range near San Diego is 5,400 feet high. This master range extends through 24 degrees of longitude, from Guadalupe to Cape Horn, and constitutes an independent feature topographically different from the rest of the Sierran group, in that it corresponds to a case with the Klamath mountains of Japan and the higher summits of Haili, collectively constituting the great range of the Sierra Nevada, which have been thrown up nearly at right angles to the trend of the continental and the same but a far more recent period of time. These must be assumed parts of recent orogenesis, the rates in the case of the Sierra Nevada.

percentage, marked by ancient mid-Jertiary granitic rocks, the loam of which makes a clay and gravel soil, one of the few contrasting types which constitute the greatest wealth of the island.

The Sierra Maestra crest rises vertically to the adjacent sea-coast, toward which its slopes descend precipitously. Then, as, toward the north, the slopes gather, the rounded ridges leading gradually down to the valley of the Cauto, the deep indentation of which again separates these mountains from the ridge to the north. The second group of mountains, the Sierra de las Escambray, is found in the extreme western province of Pinar del Rio.

The range extends from the bay of Sagua Grande to Cape San Antonio. This range consists of lower ridges of geologic formation different from those of the Sierra Maestra. Its summits culminate at the San de Guaymas, west of Habana, which has an altitude of 2552 feet. Its rocks are composed of deformed schistose series of supposed Pliocene, Cretaceous, Jurassic, and Tertiary age, the uplift of which may have been completed, or culminated, during the close of the last mentioned period. The escambrays are covered with a growth of dense pine forest on either side of many conchoidal slopes and valleys, those on the north coast being the famous *Yacalla Americana* colada.

While the Sierra Maestra proper ceases just west of Habana the strike of the rocks is accompanied by the same character of igneous protrusion is flanked by Tertiary intrusions, although most of the chief rocks, as traced, is by a series of low and connected hills, more gently curved, one passing throughout the central part of the island and another to the north of the other, a central group of Triassic into the western part of the province of Puerto Principe. In this manner, the line of a lift, varying so markedly from the sharp ridges of the west to the flattened folds in the middle provinces, constitutes the nearest reason for the axial line, close of the only mountainous outline of the island, which is the Sierra Maestra constitutes the head. The primary components of these interrupted surfaces of low relief divide the provinces of Habana, Matanzas, Santa Clara, and Puerto Principe into as follows. About due south of Habana, corresponding east of the village of Santiago, is a range of low, rounded hills, separated by valleys, including the ranges of Managua, de Arroyo Colorado, and de Capatzen. The Escambray de Sagua extends for a few miles a short distance, and the Pinar de Matanzas. Along the northern coast between the ranges of Matanzas there are many

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relative successive elevations of the island in Miocene, Pleistocene, and recent time. The island is surrounded by extensive flat-landed terraces like the Mesa Loma and the Juncal, now 100 to 200 feet high, but covered by numerous sharp, knife-edged subterranean walls as well as. Similar remnants of flat tops occur at rare intervals as far west as Matanzas, the most conspicuous of which are the Sierra Matancibre and the Pico de Matanzas at 1200 feet. To the westward in the provinces of Matanzas and Habana the north of the plateau which follows the north coast are, as already noted and nearer sea level, and a steep escarpment that gives a slope toward the south coast and represents a cliff topography that meets the sea at a gradual merging as the great central basin of Cuba, and the Caribbean, producing the extensive mangrove swamps known as the Zapatos on the coast of provinces Matanzas.

Through Puerto Principe and Santa Clara, except where broken by the central mountains of Trinidad, this low-lying stretch forms two wide coastal basins each about 200 and the width of the island, separated by a central axial strip. West of Santa Clara these two basins unite into the broad plains of Matanzas. Habana, where they constitute the central sugar region of the island—the *Ynca de Arriba*—then again diverge west of the latter city along either side of the central mountain of Pinar del Rio, where they meet at the *Ynca de Abajo*. These low-lying districts, whether in the forest or in cane fields, are red and black in color, and of a quality and fertility that can hardly be overestimated. The entire region is an almost continuous field of sugar-cane. At two places through the low-lying of the island there are depressions, the deepest of which would be 100 feet, and the least 50 feet. The first of these is between Matanzas and the south coast, at Puerto Principe, and the second between Habana and Pinar del Rio.

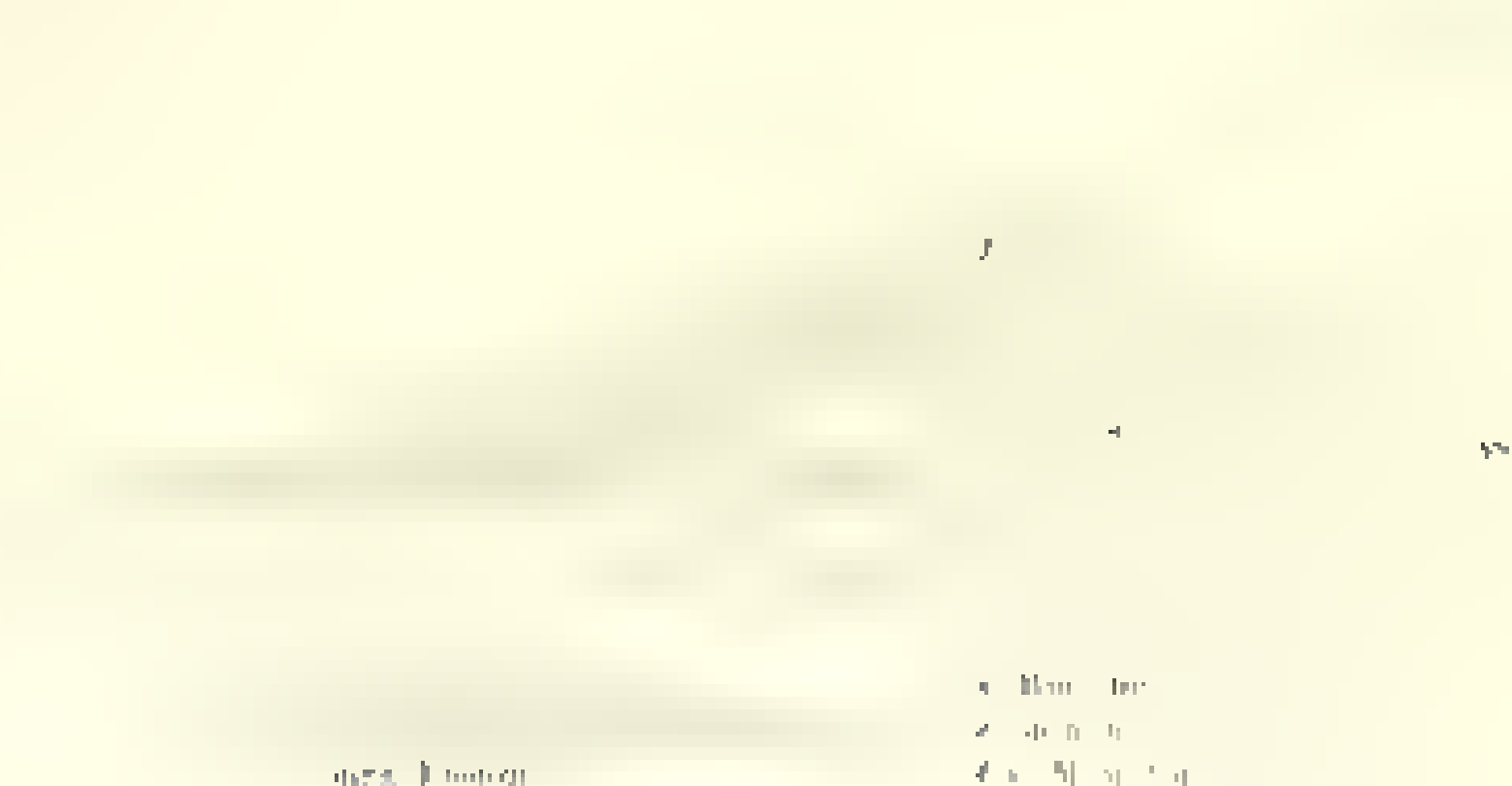


PLATE IV

The more rugged eastern provinces have not only canyons of wide extent, but great fertility. These are numerous also in Sonora, Yucatán and Quintana Roo. The most extensive of them, however, is that of the Rio San Pedro de Santiago de Cuba. It is situated in a protected position between rugged mountains on the north and south, and is traversed by a navigable river. The valley is especially fertile, and has been one of the great strongholds of the present empire.

A province is to be selected and be summarized as follows. San Pedro de Cuba is pre-eminently a rich alluvial region of high fertility, especially along the coast, with many interior valleys. Puerto Rico and Yucatán are the great regions of low mountains and deep fertile extensive valleys. Morena and Huasteca are vast stretches of level elevated land, with only a few spots of relief. Puerto Rico is certainly rich in minerals, but not in coal and iron.

The drainage of Cuba is a simple, varying character in different parts of the island. Considering the limited extent of the island, these streams are remarkably copious in volume in the plains of the central and western provinces. The streams flow from the central axis toward the corresponding coast and have a glacial water, as to be of the same high range of Texas and Florida. These streams run through wide valleys, some with only slightly incised stream-beds, and are remarkably free from alluvial deposits. Canyons are not level positions, as they reach the abrupt pleasant edge of the reef coast.



Most of the great water-flowing streams of this portion of the island do not reach the sea directly, but disappear into extensive regions, swamps. Several of the stream valleys, such as that of the Yaguet of Matanzas are accompanied by some of the most fertile and beautiful landscapes in the world. The Rio Arriba flows, which nearly connects Havana with the southwest, affords constantly an abundant supply of water. In this and other portions of the island where the limestone formation prevails, as in all the white limestone areas of the tropics, a large portion of the drainage is subterranean accompanied by many remarkable rivers Cayababo, Pedernales, Guamaque, Copalimans, San Antonio, and others along the southern slope of Pinar. It disappears in limestone caverns, where they emit into their seaward course. The fountains in this province are of great beauty, as also is the numerous natural bridge.

In the province of Sagua, a part of Puerto Principe the drainage is somewhat varied. The limestone plateaus of the island east of the Sagua give rise to many rivers, the most remarkable of which are the Cabaiguana, the Yaguajay and the Manzanillo descending to the escarpment of the high lands of the Pinar de las Yaguajay and beneath the surface and reappear on a lower terrace, over the edge of which they are precipitated in cascades.

South of the coast. Other streams of this region, such as the Yaguet of the east, flow through a deeply cultivated area, irrigating the limestone hills of the back coast border. The central portion of this province is dominated by the Rio Cauto and the Rio de las Yaguajay. This is the largest river on the island and





the culture is very different from that of the United States. The climate is very healthy, the temperature is not so high as in Japan, where the thermometer reaches for almost 100° in the spring at

everywhere the same as most of the rest of the world, from May to October the rainy season. As a rule, the rain, though it is the more abundant, is not so frequent as the slopes of the eastern end. At Havana the annual rainfall is 30 in. 1 in. of water is 1 inch in the wet season. The rainfall is of ex-cessive, being the center of the island. The average of ex-cessive is usually 50 per cent of the total, which is the tropical climate. The rainfall is the total of the vegetation. The average number of rainy days in the year is 100. There is but one period of snow falling in the island, only in 1811.

At Havana, in July and August, the warmest months, the mean temperature is 82°. The range of temperature is between a maximum of 88° and a minimum of 76°, in the winter months of January and February the average is 72°. The maximum is 82°, the minimum is 60°. The mean temperature of the year at Havana, for a series of seven years, is 75°, and in the winter, at about one foot above the sea, the temperature is occasionally found to be 70° in the winter months. The average wind is the easterly trade breeze, but from November and February and north, which is the most of the

the southern atmosphere of our own end was a trade breeze, and a forty-eight hours are experienced in the western part of the island, to which they are a fair season of the day. From 12 o'clock are the hot hours of the day, and a hot and refreshing breeze is often felt from the sea. In Santiago de Cuba the average is 80°, that of the winter months is 81° and that of the summer is 73°.

The whole island is more or less subject to hurricanes of great ferocity. The hurricane of 1846 leveled nearly 2000 houses at Havana and sank or wrecked over 200 vessels. In

Havana, the climate of the island is much more salubrious than it has been pointed. The winter months are delightful in fact, and while the summer months are more comfortable than in

most of our over-feeding. The correct response is to teach the baby to give himself (or herself) a satisfaction of hunger without the weight of. While it is the chief sickness to cause the sickness and for several but usually a very small amount of it is due to hygiene received by poor maternal consideration.

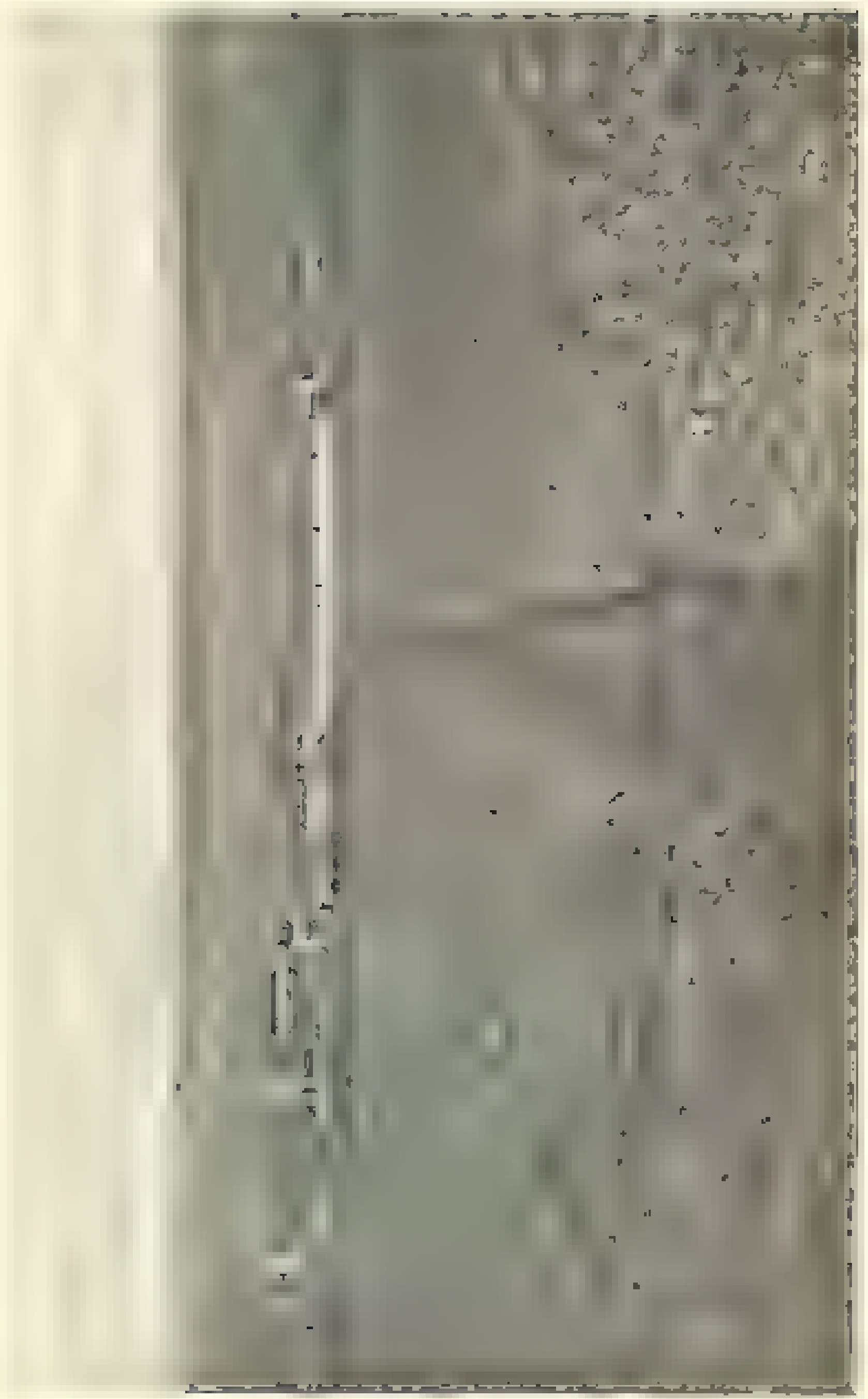
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The C. can sugar lands are an upward slope, quite different from the lowlands of Louisiana, and even inferior to those of all the other West Indies the only crop being to be planted only once in seven years instead of every year as in Antigua. The majority of the estates up to the outbreak of the present revolution were the first and most modern of the world. According to a list as elsewhere presented, this industry has nearly been destroyed within the last three years.

[illegible]

In addition to the growth of the land, there are a zone of large sugar factories in the area, growing enough to feed thousands of people of both sexes and all ages. In 1903-04 100,000 y mads of leaf tobacco and 14,250,000 cigars were exported. Large exports of leaf tobacco are also made from the coastland of the island, most of which is sent to the United States.



Coffee was once extensively exported, but the trees have been mostly cut down and replaced with sugarcane, in consequence of the greater profitability of that product. The mountain sides and all lands of the east are especially favorable for coffee and are as fertile as some of those of the famous Canebrake region of Jamaica, where coffee is grown. If the island should ever come from Spanish hands, this will become a large coffee exporting industry. There is also a considerable quantity of coffee grown, but it is nearly all consumed locally.

At the beginning of the present century the growing of bananas was a large and important industry, and even the vicinity of Nautlas and Bañados, at the eastern end of the island. During the season, from February to December, an average of a shipload a day was exported from Bañados. This fruit was the largest and finest produced in the United States. It was grown in bunches and packed in, and let down in very large quantities in the city wine trade.

Capt John S. Clark, of Philadelphia, was the largest investor in the banana business and was one of the largest investors of the fruit into the United States, turning his business over to the entrepreneur of the revolution, promptly turned his ships and business and after loading many cargoes of arms and ammunition was eventually tried and executed in a United States court and is now retained in the Eastern Penitentiary, at Philadelphia.

Oranges of various kinds grow spontaneously in all parts of the island. No attention is paid to their culture for exportation, however. Pineapples are grown and exported in considerable quantities and the use of lime. If the island belonged to the United States it would undoubtedly become one of the greatest fruit-growing countries. Mahogany and agave are also exported in small quantities.

In the provinces of San Lorenzo, Puerto Rico, and elsewhere the cattle industry owes to the fertile grazing lands reaches large proportions, and probably being large and numerous flocks of sheep and stock. Horses are also bred in all parts of the island. The common horse is a sort of pony descended from a Indian stock with the tail of a cat and a pack, or packing gait which renders it an exceptionally easy riding animal. Goats are also kept but the milk is taken from one of the inner udders and is a stuffier like that of the former. Poultry flourishes everywhere and was a staple article of food here.

1894 found in the large estates of the planters the total possessions valued at 1,000,000 less than 1,000 acres, valued in projects for wheat, corn, wheat, and other crops. In 1895 there were over 100,000 acres of plantations, valued at \$20,000,000.

MINERALS

The mineral resources of the country are in iron, copper, and guano, copper, and guano. All the deposits were mined in 1895, but over a large quantity of the iron mines of Santa Clara closed in 1895. The iron mines of the country were worked out. The iron mines situated in the mountains a few miles east of Santiago de Chile are of importance. The production of the iron mines of the country in 1895 was 302,000 tons, which constituted one-fourth of the total production of iron ore into the United States for the same period. These mines were owned by an American company, which had invested a large capital in them, but the production has been almost entirely of the present revolution. The iron mines are now open, and are the result of a large investment in the country. They are in the lower and higher of the country.

As a result of the revolution of 1895, the iron mines are now

THE IRON MINES

The iron mines of the country are in the large deposit of the iron, which for forty years has supplied the material for making the iron of the city. American investors were at these mines the year preceding the revolution and their investment was not made, and the iron mines have been closed. The iron mines are now open, and are the result of a large investment in the country.

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No other industries except those of tobacco and sugar are known. The iron mines are now open, and are the result of a large investment in the country.

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is an excellent way to see for oneself. The principal of these harbors are nearly all, particularly on the north coast, with narrow outlets pointed by elevated reef rock banks, capable of accommodating the large warships of vessels. They are so convenient as regards the first part of the sailing boat to the coast that they may be said to call to pass out at a hundred ports. The chief of these harbors are the ones mentioned. A series of ones, Nipe, and Baracoa on the north coast, and Cienfuegos, Santiago de Cuba, Manzanillo, Trinidad and Cardenas, on the south. The last mentioned is said to be one of the best harbors in the world. Habana, Cardenas, and Santiago are regularly visited by American and European steamships.

It is possible to sail from Havana to Cardenas, and to sail at the regular ports, which are also navigated by private trading vessels, carrying passengers and cargo.

TRADE

The shipping trade, both foreign and domestic, is extensive. The American foreign trade amounts to \$100,000,000 per annum. About 1,200 ocean vessels, steam and sail, annually clear for Havana, while the sugar crop finds an outlet at all the principal ports. In respect of steamers coast, the island, the entire coast being served by lines from Havana to the south by lines from Cardenas, the southern side of Havana. The tonnage of Havana and eight other ports for 1894 amounted to 3,548,739 tons, carried by 31,181 vessels.

RAILROADS

The railways aggregate less than 1,000 miles of track, and consist, principally of the central system of Havana, extending through the old second and third streets of the west and center, and connecting the capital with Manzanillo, Cardenas, Cienfuegos, and Sagua, the system terminating at Santa Clara, 130 miles east of Havana. The entire half of the island east of Cienfuegos and Sagua is dependent upon water communication for its goods, and is not locally extended westward from Havana, Baracoa and Santiago.

There were a total of 1,000 miles of telegraph lines in 1894, extending nearly 1,000 miles of cable, connecting the cities of the north and west of the Island of Pines with Havana, via Cardenas.

CUBA

Roads, highways are but short and few. In past centuries a few good roads were established at the command of Carlos el Rey and from a few interior cities to their entrepôts. Aside from the ferries, which were absolute necessities, the government has con-

Had a more far-sighted policy of road construction been undertaken, such as has been carried out by England in the narrow island of Jamaica,* Spain would have been in no danger of

one of the factors which have made possible the success of the present revolution.

Although Cuba is so situated geographically as to command the commerce of the entire American Mediterranean trade and communication with the adjacent regions, other than Mexico, have not or been cultivated nor encouraged. To reach any of the adjacent islands, such as Haiti or Jamaica—on a horse trail or on the coast—it is usually necessary for the Cuban to proceed first to New York and thence to his destination. A per-

the Havana clear, the most far-reaching of its products, can be found in a single Caribbean city.

HAVANA

Havana, which bears up on its escutcheon "Clave del Mundo" the "Key of the New World," is the point of contact and circulation of Cuba. It is situated mainly on the west and south sides of a capital harbor and surrounded by mountains ranging to 1100 feet in height. It is a picturesque and beautiful bay presenting even in the midst of the most horrible tragedy of the centuries, the gay appearance of a European city. In fact in population, interest, customs, and character, political feeling, the city being the seat of the foreign government which rules the island is a thoroughly Spanish and in this sense is entirely

* Jamaica is a British colony.



a representative of the local market and so thousands of provisions are sold. The connection is continually increasing, while agricultural drives, parks, clubs, and public institutions give it an agreeable variety. Conspectus of the magnificent panorama of waves, fortifications, hospitals, the university

school, government buildings, and a variety of churches, mean a magnificent panorama. The climate is pleasant, like Santo Domingo, but the market is not so good. The city was founded early in the 16th century, about 1515, nearly 40 years before the first voyage of Columbus to the continent. It was long a simple town with water and a sewerage system. In 1856 a large system of waterworks was installed by New York engineers, which supplied water for the supply of the city and for the harbor.

The average value of Havana exports is \$50,000,000 yearly, and is mostly carried on by American business. From the city run several lines of railway which bring to the port its produce from the interior. The only cable connection with the United States is made here.

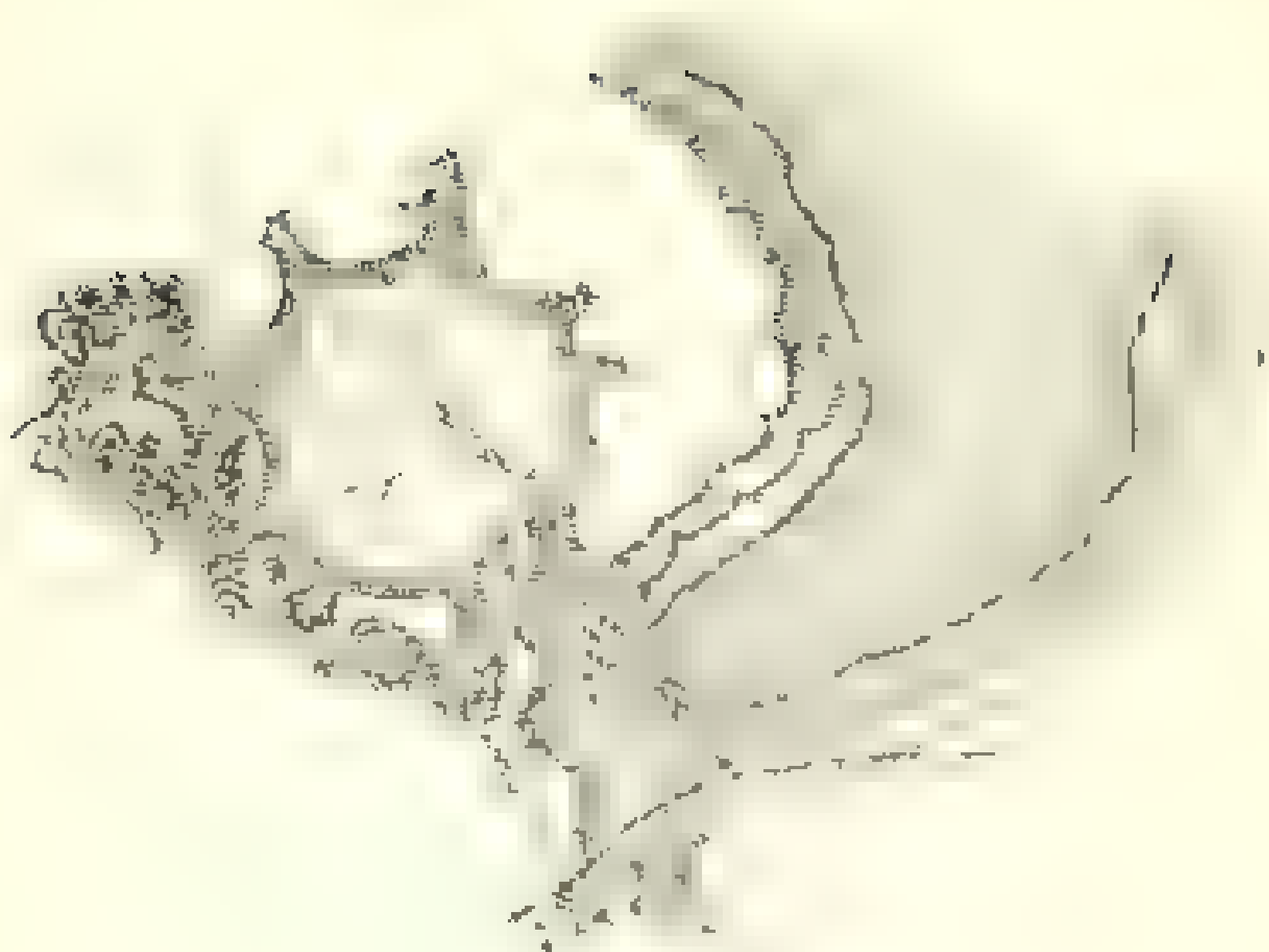
West of Havana there are several small ports, such as Mariel, Matanzas, and Palmar Blanco, which are said to be the strongest in the town of the island, and are places of secondary importance. South and east of the city were flourishing places, the largest of which is Guantánamo, enjoying a well-kept harbor, and a fine panoramic view of the capital, its roads, and its environs.

Havana has easy access to the southern coast by rail, and is one of the most comfortable places of the island. It is a well-kept city. Here the coastal cable from San Juan de los Rios and the rail line to the various lines of steamers connect the coast and the city. It is a fine city.

The second city and seaport of central Cuba is Matanzas, a port 70 miles east of Havana. The city was founded in 1515. It is one of the chief ports of the sugar region, which stretches from the coast toward the interior, and which is the most fertile in the island. The harbor like many others through the island has a policy of the Spanish government, has been allowed to remain in the hands of the Spanish government, and hence the larger steamers are obliged to call on the coast and the city.

Matanzas, founded in 1528, is one of the few towns of Cuba which can boast of having been founded in the 16th century. It lies on

* The name of the city is Matanzas, and the name of the harbor is Matanzas. The name of the city is Matanzas, and the name of the harbor is Matanzas.



it is a fine bay sheltered by a long promontory. This is one of the principal gathering-places of Cuba, and is connected by rail with Havana, and by regular steamers with all the east-borne.

East of Cardenas for a considerable distance the new railways are stretched from the northern to the southern seaboard toward the interior of the island.

Camaguey is a modern city, situated on a magnificent harbor. Although surveyed by Columbus in 1492 and spoken of by Herrera as a haven unrivaled in the world, the town was completely destroyed by refugees from Santa Domingo. Within the past twenty years the port has increased immensely. It is now the second sea-port in the island.

Trinidad, to the east of Camaguey, dates from the first years of the conquest, and has no fewer than three harbors and an excellent coal-stead. It suffered largely from the ravages of the French and English buccanniers. The city has a picturesque setting surrounded by high hills and mountains.

East of Trinidad, which is near the central meridian, are the Santa Clara, Manzanilla, Puerto Principe and Havana. These

had no if any traces on the island.

San Carlos is a beautiful city, built up from previous settlements and surrounded by charming scenery. In possession, the year before the revolution, a cultured creole* population. The main reason for its rapid most fearful sack and destruction is probably that its most representative people have been largely driven away or destroyed.

Changuay, as the Creoles call the town of Puerto Príncipe, is the only designated thorough route from the sea coast to the interior of Cuba, and cannot be the neglected by Cuban travel. The city has a railroad to the way connecting it with Havana, and is connected by rail with Nuevitas to the northward.

In the basin of the Car to. To visit the principal place. There is a story of the town, which was founded to a south coast village of the same name during the first years of the revolution. It was at Yuma, a little southwest of this place, that the great royal campaign took place in 1808. The next year, when the Spanish army returned to appear at the Indian to become victims to their rage. During the present revolution Bayamo has been an important stronghold. Havana lying to the northward of the city, it is an important key of the port of Cuba.

Extending to the northward seaward, several important ports are reached as one goes east past of the coast near that of Cienfuegos.

Valdosa, considering the circumstances and things, the principal towns are Nuevitas, Padra, Guama, Hanes, Nipon, and Barroa. These are all small and interesting places, possessing many old ruins and fortifications. Barroa, the easternmost port on the north coast of the island, is of the oldest port of the island, as it is the first continuous settlement of the New World, having been settled by Diego Columbus, the son of Christopher Columbus, in the year 1492. It is a small town, but it is the birthplace of his father. It was also a town in history as the town of Barroa, in the 2nd of February, 1898, Antonio Margo, a man of 50 years of age, a soldier, folk, was, by a most daring and successful attack, the present revolution, and from which, within a year, he had been driven to the western extremity of the

* and creole, as these people regard themselves descendants of the Spaniards. This expression signifies that the people of this island, besides a small number of negroes, are all of the same blood, and have no other blood in them, but Indian.

The population of the city is 10,000, and the population of the island is 100,000.

land, which he left after battle and was only checked by fear of retreat and assassination. He came on at last, and one of the present revolutionaries was again made king as he was at the revolution of 1895, and a great deal of the island was recovered to him.

Returning again to the south side of the island there are three fields of sugarcane east of Havana and there are a few towns on the south or west coast of the Sierra Maestra peninsula. The western coast of these is Spanish Bay. There is the chief outlet of the fertile valley of the Cauto. Since the close of the ten years' revolution in 1895 to the recent outbreak was a period of increasing trade in tobacco, sugar, wheat, honey and other products.

Santiago, as it is called by the Americans, and Jago de San Pedro by the natives, is a port second only to Havana in strategic and political importance. It is the chief outlet of the sugar exportation as well as its most important sea port. It is situated on one of the many pouch-shaped harbors which outlet to the sea through a narrow gateway, like that of Havana, and which are surrounded by many islands with handsome villas. At its narrowest part this outlet is only 150 yards wide, but it gives a great anchorage, about 1000, with many accommodations large enough to accommodate all the shipping of the island. There are many storied structures, promenades, gardens, and so forth, places to visit the valley make Santiago one of the most favored residences of the Cubans. The town is well fortified and has been practically the only stronghold of the Spaniards and one of the eastern cities during the present revolution. Back of the city the overpowering cliffs of the Sierra Maestra separate it from the interior. Several lines of railroad run from the city to the interior, one, 16 miles east, where by means of a single line were employed nearly 20000 hands at the date of the recent outbreak. The city is the telegraphic center from which radiate the submarine cables acrosses of the island for the western coast, Central Mexico, Central South America, Haiti, Porto Rico and the Lesser Antilles.

INDEPENDENTS

For this there is no question upon which the American people are so well informed as upon that of the population of Cuba.

A reliable estimate has been taken by the government for many





land, the Chinese, and, under the influence of environment have become a different race from the people of the land of origin.

Under the influence of their surroundings, they have developed into a people, industrious, and normally peaceable race, not to be judged by the exclusiveness which they have developed under a tyranny such as has never been imposed upon any other people. The better class of Chinese, as the natives are fond of calling themselves, are certainly the best, the most valiant and the most intelligent men of the island while the women have the highest type of beauty. It is therefore not that no woman has ever become a poet etc, and crime is certainly almost unknown among them.

While these people may not possess our local customs and manners, they have strong traits of civilized character including honesty, family attachment, hospitality, politeness of address, and a respect for the golden rule. While numerically inferior to the ultimate majority of Poles, Jews, and Slavs in the eastern United States, against which no official voice is raised here and no respect is paid to these people to justify the abuse that has been heaped upon them by those who have ignored their rights and who are gripped by fears that they might by some means be absorbed into our free population.

Notwithstanding the disadvantages mentioned, the Chinese have labored, they have accumulated many wealths and become professionals. Their sons and daughters follow the traditions of the United States, England and France as well as men of the profession of the professions of law and medicine. The influence of the education in the United States has been great, stronger than professor of evolution and

regarding the power of our navy and the national credit authority we fear in our country today, up to this case. Thousands of these people driven from their beloved island, have settled in Paris, London, New York, Mexico, and the West Indies, where they hold a prominent position in society, and even the elites of the upper classes with their superior material wealth have been eagerly welcomed, as can be seen in the case of Mexico and the Philippines, which have now become the most important centers of the world.

There are the people who are the leaders of the movement for Cuba's freedom who struggled so valiantly to throw off the yoke of an inferior governing class. No crime in our history has been

more just than taxes, as self-inflicted wounds greater and yet the world, turning as the agitation of the past three years, and among a lot of them, so completely have they been cut off from communication, with as much little as has been left, that it is difficult to see its growth in the struggle of the nation.

THE NEGROES

In addition to the white creole population, 22 per cent are black or colored, leaving two latter words in the creole population, of a mixture of the black and white. The black population of Cuba has been as little understood as the creole, as has been the negro especially by those who have not seen him. It is one of a short and painful freedom, no island would be more ignorant of it. The black and colored people of the island as a class are more independent and manly in the coloring than the better part of the Latin colonies. Having possessed even before slavery was abolished in the island the free rights of free marriage, of seeking a new master at their own, of procuring and freedom by water, and of acquiring property. While the negro states with the creole and the white rights possessed by any of the other islands, the colored civilizes are gentler but more, it should be a strong taste for an excess. Marriage and the abolition removed the regulations, but the negroes were not content with this country.

The colored people of Cuba belong to several distinct classes. The majority of them are descendants of slaves imported during the present century, but a large number like the negroes of Louisiana and the maroons of Jamaica, come from a stock which occupied the earliest Spanish settlements among the negroes who, with the two white companies of Columbus, were first crossed the United States from the coast of Mexico to the Florida in 1514-30. The amalgamation of the classes in the present day was a black stock composed of a part of these African tribes of the Angola-Madagascar type, and the white people in this country with whom they can be compared.

The current explanations of freedom among the colored people of this race in 1800 were not explanations. The slaves of the Spanish were never subjected to a more objectionable and cruel law than the French in whites of Cuba. For they at least were protected from arbitrary capital punishment and from the most important institutions of the French, such as that of the slave market and the



since the collection of the statistics given. What changes the terrible conflict has wrought can only be surmised. Doubt, however, that what has at least been refused to information and to the only emigration of non-combatants, destruction of property, official deportation of suspects and political prisoners, and by the revenue laws.

The three populations of the bay were composed of four del Rio Horno on Matanzas, and San Juan has been completely obliterated. Estimates of the extermination are of course conjectural, but the Bishop of Habana is authority for the statement that not less than 40,000 people have been buried in the unsanitary cemetery.

The scaled portions of the accompanying diagram show the depopulated portions of Cuba.

THE PROVINCE OF MATANZAS

Cuba is divided into 11 provinces, and the province of Matanzas is the smallest, containing 57 parishes, of which 11 are in Havana, leaving 46 parishes. Not a single non-protestant parish is to be found of importance. In the cathedral chapter at Havana there is only one Cuban, and only two natives have ever obtained any sort of preferment—the inferior ones.

The same or poorer conditions in the other provinces exist, the inferior being used for base ends in the hands of men who are to be pitied at the prompt of the public treasury. We do not usually believe, as I am hearing that church persons do for what they say, that Spaniards in such a state of culture are very particular in fact, and they do but cross of things with the church authorities by no means to prove. I remember that the Cuban natives who have seen a Spaniard in the priest's dress are not so badly as does the Protestants regard him.

There is but a parish in the whole island that is a protestant stronghold. Recently there was a crusade against the Catholic marriage ceremony. The object, on our knowledge of the loss of love to the priest. The crusade was led by one Spanish church priest, who charges Catholics five twice as high as to the Spaniards. Protestants are forbidden to have a share of profits—and by the church, but by the Spaniards. No priest goes to these remote parishes unless he happens to have been born in Spain. It is too small a world and too small a number of churches and not too high a price.

Hereditarily is the injury. It is partly the Spaniards' duty to the Cubans, who do the church that bread of labor. The protest-



ent attachment on. The insurgents are Catholics and love their country. The religious sentiment of the island is as strong as the political.

Education is still more neglected. The chief educational institutions are the Habana University, two professional schools with astronomical observatories attached, two normal schools, and the seminaries. There are several private as well as public schools amounting to all 750 institutions. There are some 30,000 students of all schools.

The Habana University is modeled after the Spanish University and its curriculum is chiefly devoted to medicine, law, literature and an obsolete system of philosophy. The entire faculty was composed of ex-communicated and excommunicated last year, with the result that have a day's been worked upon with a suspension of hostilities. The public schools are comparatively few, most of the better than the patronizing the private institutions.

GOVERNMENT

Cuba has two high courts, but the captain general is above either court, as appears from the royal decree of June 3, 1835, defining his duties and prerogatives. His power is fully over-

ARTICLE 15

the execution of any order or resolution of the home government "whenever he may deem it best for the public interests."

ARTICLE 16

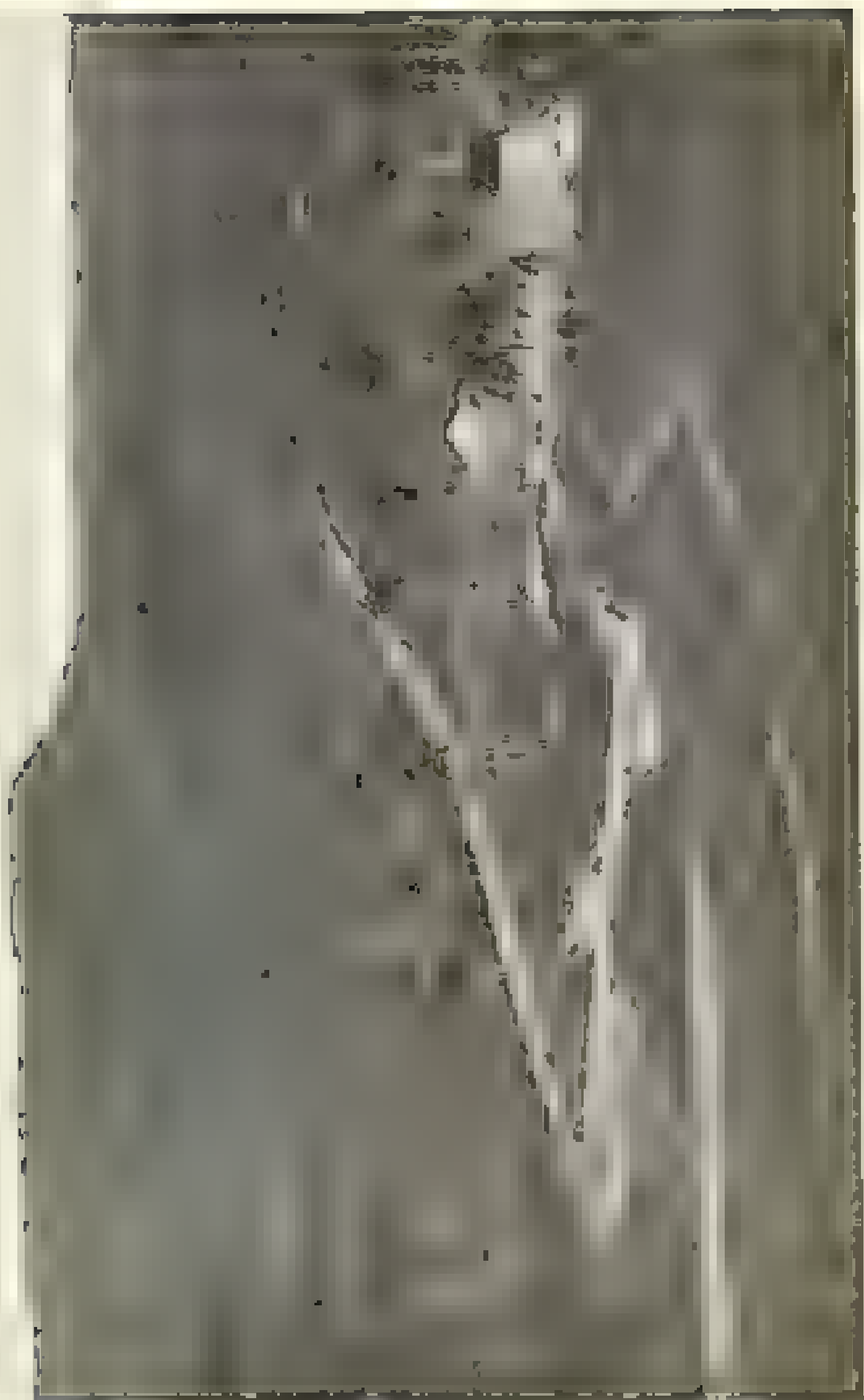
Spain is a monarchy that has been a crown colony of Spain, occupying a relation to that country, so far as the sphere of influence government is concerned, comparable to that which

authority. Some of the Spanish colonies, like the Canaries and Celestines, are integral parts of the mother country having equal rights with the people of the peninsula. Cuba, however, has never been treated as such as a second rate colony. The central and executive authority of the crown has been represented by a governor called the captain general, controlling the land and sea forces and residing at Habana. Having the right of settling and annulling judgments of the local courts. His authority was last broken even in times of peace, by a Spanish soldierly force and the army of the United States and with police powers that own in this country. In addition to the army of soldiers, there

vast force of subaltern or inferior Spaniards, who collect the customs and attend to other minor executive duties.

The lower classes of the Habana—the people, *campesinos*, and blacks—are organized into a large body as a defence force, known as the *voluntarios*, who, we are never having been known to take the field against arms and fire to the peace of the city, being scared equally by the Spaniards over whose heads they wave the threat of revolt, especially upon any occasion of punishing reform, and by the riotous and turbulent Cubans, over whom they hold the threat of massacre. Up to date the record of this organized body has been a series of minor eruptions, and has shown a growing of general discontent rather encouraged from the threat brought to them by the indignation of a crowd assailing the residences of the magistrates and a list of wrongs the authorities to execute. One hundred students, a boy or so per family, because some of them had been accused of scuttling the first place in a vote of election up the remains of a volunteer. Fifteen thousand volunteers met round with a vote of a terrible execution.

Not the primary aim of one of the government has been to attend to the prerogatives of the Crown and the collection of revenues, as a nation has been largely devoted to the personal enrichment of the citizens through merchandise and the prevention of the accession of the island. It has practically ignored the other functions of government such as the collection of taxes, the promotion of education, or the establishment of public works and improvement of navigation. Few, if any educational institutions have been created and no examination for public highways have been instituted, nor have any of the necessities of a public character been made outside of the city of Havana. Even when the Cubans have undertaken such improvements, they have been heavily taxed for the benefit of the Spanish officials. The administration of the island has been since the accession of the island an absolute military despotism on the part of the mother country. At no time has it rested upon the personality of the captain-general there have been epochs of peace and prosperity but even the middle of the present century the island was ever in a state of insurrection, drought or epidemic, and in general a growing hatred between the governing and the governed classes with constant and increasing restrictions upon the latter. At times the revoltary people were reduced to submission by promises of local self-government which have almost never broken.



It is not to be presumed that the Spanish crown has had a variety of schemes of giving to the whole of the island greater political privileges, but all of these, if any in the latest and proposed autonomy scheme, have been the merest subterfuges, void of the true essence of moral self-government, with a string of subterfuges by which a real and real power would be placed in the hands of the Spanish governor general. Thus it was that in February 1898 the ten years' revolution was ended by the same champion. Under the stipulations of the treaty the island was allowed to be represented in the Spanish cortes by 13 senators and 30 deputies; but restrictions were so drawn that the island which until then was practically debarré from participation in the choice of these members, now obtained against these Spanish representatives were utterly powerless to press any of their own measures in the cortes or over the members or against the people.

This arbitrary despotism has been accompanied by a system of exorbitant taxation, such as has never been known elsewhere in the world. This system levied duties an average of 40 per cent on all imports, and added to taxes upon real estate, the industries, the arts, the professions, the slaughter of animals, and an onerous system of stamp taxes, which even included a tax for recording property in the office of a notary, a post stamp upon every arrival at a hotel. The process of possible direct taxation became exasperated, the government even resorted to the extraordinary act of a national census of a state, including every person who by law was a profit of \$1,000.00 annually.

In 1894 the total revenue collected was about \$5,000,000, or \$20 per capita, and of which, except \$1,000,000, was spent, mainly in the payment of the salaries of some of the Spanish gentry and other high officers and the Spanish army. In addition to the heavy taxation the poor negro is burdened by a system of illegal taxes under the form of bribes, which are necessary to obtain the legal recognition. Half or more of this money was expended for education, science, public construction and for improvements, kept ways, sanitation, and other for revolution purposes, and the loss to which the government devotes its per capita tax of \$17.65. It is also a remarkable fact that while the extraordinary taxation of the people by about \$1,000,000 have been permitted to be a constant cry during the past century, and of the negro have been converted to maintain the old traditions. It is not an overstatement to say that the excessive and wastefulness of the

of 1929, probably sent to the agent in London, and to the director of the American Consulate in London, was tried to persuade people. The third attempt to exert influence, a number of present, history and a number of Mexican, who expressed serious doubts and concerns about the policy.

[illegible]

We now have a very limited knowledge of the geographic resources, and of the people and their culture and history. In addition, we have no accurate survey map of the whole country, no accurate estimate of the number of people in it. It is therefore a matter of some regret that the power of the great government which has so far not lost sight of the type of humanity which made every demand on her, and which, at the same time, has so far been able to find a way to meet the demand, will have to be so unhelpful to the people which it is supposed to protect.

Suppose that \mathcal{N} is a \mathcal{C}^1 norm on $\mathcal{C}^1(\mathbb{R}^n)$. Then

The *Journal of American Geography* is a peer-reviewed geographic journal, a part of the *Journal of the American Geographical Society*, which is the oldest and largest of the journals of the Association. The *Journal* is the primary outlet for original research in all areas of geography, and is published by the American Geographical Society, a non-profit organization dedicated to the advancement of the geographical sciences. The *Journal* is published quarterly, and is available to members of the American Geographical Society. The *Journal* is a leading source of information on the state of the art in geography, and is a must-read for all geographers.

[illegible]

They slept in one of a very small house at the foot of the hill, and

THE UNIVERSITY OF CHICAGO PRESS

[illegible]

The antennae of the leaf miner are very light. The air is pure, dry, and healthy, and the wire screen against the sun rays is over the insects are gentle and comforting.

and the results of the experiments are a very simple and unobscured yet an unquestionable proof of the fact that with strychnine.

is that the degree of freedom is not a continuous property but only a discrete degree of freedom. It is a discrete property.

For many years a large pond on the lake has been left unused on the island. In 1982, a total of 100,000 fish were stocked.

THE JOURNAL OF CLIMATE

Florida Canal Commission which has done considerable work in 1934-35 is now completed from Mosquito to a dike to Moon Bay, a five foot channel (increased from two feet) is shown from Mosquito to the Jupiter River, through Lake Worth to Palm Beach. Three short cuts could close the canal - two between Moon Bay and Tequesta and one joining North river with Jupiter creek. Florida by the canal will connect the St. Johns river with the gulf bay rendering possible an Indian passage along the Atlantic coast from Key West to Key West.

THE ORIGIN OF WEST INDIAN BIRDS, ETC.

By EDWARD M. TADWELL.

Monist of Natural Science, New York.

A study of the origin of the life of a given area involves so extensive a knowledge of the facts as to involve the consideration of so many circumstances of the derivation of the fauna of a region that it is based on the data of reports of a variety of specialists, each one of whom should state a brief history of facts in the case as they have been ascertained in his particular research. Thus, before attempting to account for the origin of life in the West Indian islands, we should have reports from the geologist, archaeologist, ethnologist, paleontologist, zoologist, ornithologist, and botanist, and it is very probable that any one of these reports will be contradicted by those of another.

Following these principles, I have collected a number of studies of West Indian birds, the two published during the past two years, the details of results of which were published in other papers.*

My remarks have to precede my statements that so far as isometry of form is concerned, our knowledge of the relationship of the West Indian species to other groups is—That, as I say, I am ignorant of and some of the general secrets, but I expect that if a naturalist is not likely to reserve any kind of knowledge—except a few of matters few will have largely to consult the literature of the history of the birds of every West Indian island, and to read the reports on the results of the research.

It is the story of the birds of the islands now under consideration in West India.

Among the 2500 species of geophiles of the island of Hispaniola, at least 1000 of the surrounding islands, and a great many of the neighboring islands of North America, which occur in the West Indian group, are the result of the migration of birds from the continent of America. It is not 10 per cent of the total number of birds of the islands, but it is a surprising degree of species of birds which we are now able to determine the relation

*See *Monist of Natural Science*, 1890, p. 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

*See *Monist of Natural Science*, 1890, p. 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Keywords: Method of, Ring-fused, Crystalline, Tetraol, 1,4-dioxane

To the great of the Lords of Council, Richard, Governor, &c. less than 140 names of people belonging to these families, and their representation in the West Indies is a point which cannot be ignored. Especially does the value we are now getting out of our colonies for that with us except, as they are heirs of territories secondary to us, who we should be, therefore expect to fill our colonies with us.

Although my review papers have presented a summary of available research, I should also be clear as to the limitations of the study. One major limitation is the potential for reporting bias. The studies included in this review were those that reported results favoring the use of a Web 2.0 tool. It is possible that other studies have been conducted that have not been published, or that have been published but not included in the review. This is a common problem in the literature, and it is important to be aware of it when interpreting the results of a review. Another limitation is the heterogeneity of the studies included in the review. The studies used a variety of Web 2.0 tools, and the results may not be generalizable to all tools. Finally, the review is based on a limited number of studies, and it is possible that the results may change as more research is conducted.

REPORT OF THE COMMISSIONERS WITH C. AD.

As the $\text{Re}(z) \rightarrow \infty$ and $\text{Im}(z) \rightarrow 0$, we have that $\Gamma(z)$ approaches the gamma function along the real axis, $\Gamma(x)$, where x is real. For $\text{Re}(z) \rightarrow 0$ and $\text{Im}(z) \rightarrow 0$, the function $\Gamma(z)$ approaches the gamma function along the imaginary axis, $\Gamma(iy)$.

[illegible]

So, what for the negotiator? What of the contract? How often is it composed? These may best be considered in detail if presented in tabular form and the accompanying tables will accordingly show the proper place for various notations and studies from tables and the principal aspects of character and position.

$$T_{\text{max}} \approx T_0 + \frac{\rho_p}{\rho_f} \left(\frac{V_p}{V_f} \right) \left(\frac{T_p - T_0}{T_p} \right)$$

from the United States to that is and for the two years ending June 30, 1907.

The principal article exported is sugar, the largest quantity of which was in the fiscal year 1906-07, when it amounted to 24,778 tons of 2,240 pounds, or over one million tons of 2,000 pounds. This was equivalent to 20 per cent or more per cent of our output, and comprised about one-third of our total export value. The next most important is wheat, the exports of which amounted to our highest figures in 1905-06, when they amounted to a value of considerably more than one-third of the total value of our own wheat crop. The only other class of exports that calls for special mention consists of forest products, which have a value of 18.2 per cent of nearly seven million dollars.

The principal articles of export are, as will be seen from the following table, breadstuffs, iron, minerals and pig iron, the first of which articles was rapidly becoming very large the year ending at the end of the investigation. Coal, coke, and oil are also exported in considerable quantities, indeed so a very considerable exports that there is no considerable section of the country in which it is not to a greater or less degree benefited by the market for our agricultural, mineral, and manufactured products of export value.

Between 1906-07 and 1906-07, however, our imports from Canada suffered a decline of 7.7 per cent, and our exports to her increased by 10.4 per cent, the imports being composed of less than one-sixth of our exports to her, the remainder consisting of our raw materials. During the first year of the investigation our trade balance over thirty million dollars, and during the second year a further sum of eight million dollars, and during the third year a still further sum of five million one hundred dollars, making a total decline of sixty million dollars in our trade balance in favor of our foreign trade and of a total of thirty million dollars and is carried almost entirely in American goods.

Is it any wonder that, under these conditions the important considerations that have permitted the United States government to seek to put an end to the unfortunate conditions so long prevailing in the United States jurisdiction for each year at least and have been found in it would permit the recovery of our commercial relations with that once extensive and profitable market?

CAPTAIN CHARLES D. SIGSBEE, U. S. N.

Captain Charles Dwight Sigsbee, U. S. N., whose portrait is the frontispiece of this number of the magazine, was born July 6, 1842, in New York. He graduated from the Navy Academy at Annapolis, serving for eight months in the Civil War, was ordered to *Man-of-war* at the battle of Mobile Bay, and in the latter part of 1864 he was made a first-rate steamer officer. In 1874 he was assigned as commander of the *Fishes*, and during the succeeding four years was engaged in deep-sea exploration in the Gulf of Mexico and the Gulf of Mexico. During one of his cruises Prof. Alexander Agassiz was on the *Fishes* and together they accomplished much.

While engaged only after looking at a number of the *Fishes* specimens, he was able to make improvements in instruments for deep-sea sounding and virtually designed a new one for that purpose which has since been adopted all over the world. The results of the repeated soundings made by the *Fishes* under his command were published as an appendix to the report of the United States Ocean Survey for 1880, under the title "Deep-sea Soundings and Logging." A paper on "Methods of the Meteorological Apparatus used on board the Coast and Geodetic Survey Steamer *Fishes*." This work has proved to quite in many ways, as can be seen with reference to the estimate given involved in the study of the Gulf Stream. The report is a very reliable and it is a fine example of deep-sea exploration.

For several years prior to taking command of the *Thetis* Captain Sigsbee was Hydrographer of the Navy Department. At the time of the organization of the Hydrographic Office he developed many improvements for the purpose of simplifying and strengthening the data and the formation of the marine from both the physical and the scientific sides. During his term in charge of the Hydrographic Office Captain Sigsbee was a member of the U. S. Board on Geographic Names.

Captain Sigsbee's report on the progress of knowledge of the ocean bottom and the progress of the United States in the front rank of scientific hydrography. As a naval officer and an American the events of the last few years have shown what the most of his life has been.

RECEPTION TO CAPTAIN C. D. SIGSBEE, U. S. N.

Not only has the name of Captain Charles D. Sigsbee become a household word throughout the length and breadth of the United States as that of the great commander of the ill-fated *Tamagoua*. Of one, to that, the Sigsbee himself, by the admirable self-restraint and judgment, it was to be displayed in the most trying of all conceivable circumstances has won "gold and glory" from all sorts of people. In addition, however, to being a hero, officer, a true patriot and a just man, he has distinguished himself as a man in the preceding article, by his valuable contributions to hydrographic science, so as to show, even that his position in the service of the National Capital was well recognized and assured as his standing as a naval officer.

It was accordingly fitting, therefore, that the National Geographic Society, of which Captain Sigsbee has long been an active member should take advantage of his recent arrival in Washington to do him honor. Hence, on his arrival the following letter was addressed to him by President Alexander Graham Bell:

WASHINGTON, D. C., March 26, 1895

Captain Charles D. Sigsbee, U. S. N. Washington, D. C.

My Dear Sir:—You have earned the gratitude of America by your noble conduct in a great and desperate emergency, when you bravely carried on and won the battle of the *Tamagoua*, the greatest naval combat which has since the Civil War witnessed in our history.

The citizens of Washington, proud of you, are to give you the warmest welcome of the city.

Your fellow-citizens of the National Geographic Society desire to welcome you, and have accordingly been known as a scientific hydrographer, worthy to gratify us by his labors and welcome you back to the city of our home.

The Board of the National Geographic Society, in view of the fact that a reception is to be held in the parlors of the Arlington Hotel on Saturday evening, April second, from nine to eleven o'clock.

I am, very respectfully, yours as ever, Sir,

Alexander Graham Bell.

President of National Geographic Society.

The following is Captain Sigsbee's requested reply:

WASHINGTON, D. C., March 26, 1895

President Alexander Graham Bell

President of National Geographic Society, Washington, D. C.

My Dear Sir:—In addition to the great honor of your letter of the 24th, when I am directed by the National Geographic Society to reply to you,

meeting on Sunday to meet my associates of the Society as well as other members of Washington, I beg to thank you sincerely for the kind and generous way in which you acted. The honor which the Society proposed for me I accept most gratefully, and am proud of the good will towards me which has been so generously shown. I am proud of those who respect me, and I am proud of the Society of Friends in America.

The only thing I regret is that I am unable to have the fact communicated to my associates in a more satisfactory manner than I have the heart of my associates of the Society.

I have the impression of your offer, which please express to the Society for me.

Yours most sincerely and respectfully

Wm. Lloyd Garrison
London, 15th April

Three days later—namely, on the evening of Saturday, April 2—the patrons of the Arlington Hotel were assembled with one of the most brilliant and distinguished assemblies ever brought together in the American capital. The President of the United States, the Vice-President and Mrs. Hubert, and a very, very large gathering of Statesmen, Diplomats, Scientists, Military and Naval Officers of high rank, and other distinguished persons to the number of 1,000—came to do honor to the Society and to the Union, each of them was presented by President Lincoln.

During the afternoon the Society performed a function entirely in support of the anti-slavery cause, and in truth "national" in any of its kind. Every one was asked to give a short address before the assembly, in addition to the address of the Chief Magistrate of the Nation and of a great many of the leading states of the Union and few can imagine the grandeur of the occasion. The President, a great deal of honor was bestowed on him by the Marine Corps, whose band played a grand march, performed a procession of patriotic songs, and for the first time for the presidency of the Navy with the great attachment of the United States were decorated with the national flag. The expression of the resources of the government in the defense of the Union.

COGNITIVE LITERATURE

Ed. of *The Study of the Jews with Benjamin Sachs*. Univ. of Chicago and New York. 1966. 344 pp. \$4.00. 1968. 500 pp.

Journal of the Department of Labor, Vol. 15, U. S. GOVERNMENT PRINTING OFFICE, 1914.

Statistical Abstract of the United States, 1887. *Thirteenth Annual Report*.
Bureau of Statistics, formerly Department of Commerce and Finance. 4, 2

[illegible][illegible][illegible]

511

[illegible]

This report follows the same format as the previous report and presents the same level of information as the previous report. The report is prepared by the Prof. Agency.

* The authors are grateful to the National Science Foundation (NSF) for support of this work under Grant Number DMR-0607897.

It is not surprising that I observe that all of the data works and is consistent with the model and that all of the data points are held by the theory. I am not sure if it is a good idea to include any more data.

one of \$4,000 February, 1944, up to 17 per cent, paid on day
and 25,000 up to 10 per cent of loan is well above average interest rate
obtained. The percentage of amount loan is not necessarily interest rate

45. The total amount paid in navigation on commerce is being preferred with the 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 257

The total cost to the state for the experimental program is \$75,000. The state will also provide \$12,500 for the program's administrative costs. The state will also provide \$12,500 for the program's administrative costs. The state will also provide \$12,500 for the program's administrative costs.

On August 4, 1971, two KKK from Birmingham were contacted with a request to come and to "discuss" the activities of Brown in the area. They refused, stating "we are not here to be racist and that we are of the left and make sure our hair is not longer than the rest of the people of the community." The average cost of starting a youth group is between \$150.00 to \$200.00 per month of 10 to 15 members. The average cost of starting a youth group is between \$150.00 to \$200.00 per month of 10 to 15 members. The average cost of starting a youth group is between \$150.00 to \$200.00 per month of 10 to 15 members. The average cost of starting a youth group is between \$150.00 to \$200.00 per month of 10 to 15 members.

By the report, within 3 hr, 3 passengers, 20, 21 and 22 years old, "had a
paroxysm" of convulsions and died. In comparing these children with the
one at 1 hr of paroxysms and of age 14 yrs, it appears that a convulsion
got in every 2 hrs. 4th convuls. was at 10, and one in every 1 hr, 12 convuls.
was at 12, 14, 16 and at 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000, 1002, 1004, 1006, 1008, 1010, 1012, 1014, 1016, 1018, 1020, 1022, 1024, 1026, 1028, 1030, 1032, 1034, 1036, 1038, 1040, 1042, 1044, 1046, 1048, 1050, 1052, 1054, 1056, 1058, 1060, 1062, 1064, 1066, 1068, 1070, 1072, 1074, 1076, 1078, 1080, 1082, 1084, 1086, 1088, 1090, 1092, 1094, 1096, 1098, 1100, 1102, 1104, 1106, 1108, 1110, 1112, 1114, 1116, 1118, 1120, 1122, 1124, 1126, 1128, 1130, 1132, 1134, 1136, 1138, 1140, 1142, 1144, 1146, 1148, 1150, 1152, 1154, 1156, 1158, 1160, 1162, 1164, 1166, 1168, 1170, 1172, 1174, 1176, 1178, 1180, 1182, 1184, 1186, 1188, 1190, 1192, 1194, 1196, 1198, 1200, 1202, 1204, 1206, 1208, 1210, 1212, 1214, 1216, 1218, 1220, 1222, 1224, 1226, 1228, 1230, 1232, 1234, 1236, 1238, 1240, 1242, 1244, 1246, 1248, 1250, 1252, 1254, 1256, 1258, 1260, 1262, 1264, 1266, 1268, 1270, 1272, 1274, 1276, 1278, 1280, 1282, 1284, 1286, 1288, 1290, 1292, 1294, 1296, 1298, 1300, 1302, 1304, 1306, 1308, 1310, 1312, 1314, 1316, 1318, 1320, 1322, 1324, 1326, 1328, 1330, 1332, 1334, 1336, 1338, 1340, 1342, 1344, 1346, 1348, 1350, 1352, 1354, 1356, 1358, 1360, 1362, 1364, 1366, 1368, 1370, 1372, 1374, 1376, 1378, 1380, 1382, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1404, 1406, 1408, 1410, 1412, 1414, 1416, 1418, 1420, 1422, 1424, 1426, 1428, 1430, 1432, 1434, 1436, 1438, 1440, 1442, 1444, 1446, 1448, 1450, 1452, 1454, 1456, 1458, 1460, 1462, 1464, 1466, 1468, 1470, 1472, 1474, 1476, 1478, 1480, 1482, 1484, 1486, 1488, 1490, 1492, 1494, 1496, 1498, 1500, 1502, 1504, 1506, 1508, 1510, 1512, 1514, 151

Therefore, these two sectors do not seem to be particularly affected by the crisis and, in fact, they showed a slight increase in employment. In contrast, the private sector, which is the most affected by the crisis, experienced a significant decrease in employment. This decrease was especially pronounced in the manufacturing sector, which is the most affected by the crisis. The decrease in employment in the manufacturing sector was due to the fact that the demand for manufactured goods decreased significantly. This decrease in demand was due to the fact that consumers were not able to afford manufactured goods. The decrease in demand for manufactured goods was due to the fact that consumers were not able to afford manufactured goods. The decrease in demand for manufactured goods was due to the fact that consumers were not able to afford manufactured goods.

were 9 to 14, 15 to 20, 21 to 26, 27 to 32, 33 to 38, 39 to 44, 45 to 50, 51 to 56, 57 to 62, 63 to 68, 69 to 74, 75 to 80, 81 to 86, 87 to 92, 93 to 98, 99 to 104, 105 to 110, 111 to 116, 117 to 122, 123 to 128, 129 to 134, 135 to 140, 141 to 146, 147 to 152, 153 to 158, 159 to 164, 165 to 170, 171 to 176, 177 to 182, 183 to 188, 189 to 194, 195 to 200, 201 to 206, 207 to 212, 213 to 218, 219 to 224, 225 to 230, 231 to 236, 237 to 242, 243 to 248, 249 to 254, 255 to 260, 261 to 266, 267 to 272, 273 to 278, 279 to 284, 285 to 290, 291 to 296, 297 to 302, 303 to 308, 309 to 314, 315 to 320, 321 to 326, 327 to 332, 333 to 338, 339 to 344, 345 to 350, 351 to 356, 357 to 362, 363 to 368, 369 to 374, 375 to 380, 381 to 386, 387 to 392, 393 to 398, 399 to 404, 405 to 410, 411 to 416, 417 to 422, 423 to 428, 429 to 434, 435 to 440, 441 to 446, 447 to 452, 453 to 458, 459 to 464, 465 to 470, 471 to 476, 477 to 482, 483 to 488, 489 to 494, 495 to 500, 501 to 506, 507 to 512, 513 to 518, 519 to 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to 1022, 1023 to 1028, 1029 to 1034, 1035 to 1040, 1041 to 1046, 1047 to 1052, 1053 to 1058, 1059 to 1064, 1065 to 1070, 1071 to 1076, 1077 to 1082, 1083 to 1088, 1089 to 1094, 1095 to 1100, 1101 to 1106, 1107 to 1112, 1113 to 1118, 1119 to 1124, 1125 to 1130, 1131 to 1136, 1137 to 1142, 1143 to 1148, 1149 to 1154, 1155 to 1160, 1161 to 1166, 1167 to 1172, 1173 to 1178, 1179 to 1184, 1185 to 1190, 1191 to 1196, 1197 to 1202, 1203 to 1208, 1209 to 1214, 1215 to 1220, 1221 to 1226, 1227 to 1232, 1233 to 1238, 1239 to 1244, 1245 to 1250, 1251 to 1256, 1257 to 1262, 1263 to 1268, 1269 to 1274, 1275 to 1280, 1281 to 1286, 1287 to 1292, 1293 to 1298, 1299 to 1304, 1305 to 1310, 1311 to 1316, 1317 to 1322, 1323 to 1328, 1329 to 1334, 1335 to 1340, 1341 to 1346, 1347 to 1352, 1353 to 1358, 1359 to 1364, 1365 to 1370, 1371 to 1376, 1377 to 1382, 1383 to 1388, 1389 to 1394, 1395 to 1400, 1401 to 1406, 1407 to 1412, 1413 to 1418, 1419 to 1424, 1425 to 1430, 1431 to 1436, 1437 to 1442, 1443 to 1448, 1449 to 1454, 1455 to 1460, 1461 to 1466, 1467 to 1472, 1473 to 1478, 1479 to 1484, 1485 to 1490, 1491 to 1496, 1497 to 1502, 1503 to 1508, 1509 to 1514, 1515 to 1520, 1521 to 1526, 1527 to 1532, 1533 to 1538, 1539 to 1544, 1545 to 1550, 1551 to 1556, 1557 to 1562, 1563 to 1568, 1569 to 1574, 1575 to 1580, 1581 to 1586, 1587 to 1592, 1593 to 1598, 1599 to 1604, 1605 to 1610, 1611 to 1616, 1617 to 1622, 1623 to 1628, 1629 to 1634, 1635 to 1640, 1641 to 1646, 1647 to 1652, 1653 to 1658, 1659 to 1664, 1665 to 1670, 1671 to 1676, 1677 to 1682, 1683 to 1688, 1689 to 1694, 1695 to 1700, 1701 to 1706, 1707 to 1712, 1713 to 1718, 1719 to 1724, 1725 to 1730, 1731 to 1736, 1737 to 1742, 1743 to 1748, 1749 to 1754, 1755 to 1760, 1761 to 1766, 1767 to 1772, 1773 to 1778, 1779 to 1784, 1785 to 1790, 1791 to 1796, 1797 to 1802, 1803 to 1808, 1809 to 1814, 1815 to 1820, 1821 to 1826, 1827 to 1832, 1833 to 1838, 1839 to 1844, 1845 to 1850, 1851 to 1856, 1857 to 1862, 1863 to 1868, 1869 to 1874, 1875 to 1880, 1881 to 1886, 1887 to 1892, 1893 to 1898, 1899 to 1904, 1905 to 1910, 1911 to 1916, 1917 to 1922, 1923 to 1928, 1929 to 1934, 1935 to 1940, 1941 to 1946, 1947 to 1952, 1953 to 1958, 1959 to 1964, 1965 to 1970, 1971 to 1976, 1977 to 1982, 1983 to 1988, 1989 to 1994, 1995 to 2000, 2001 to 2006, 2007 to 2012, 2013 to 2018, 2019 to 2024, 2025 to 2030, 2031 to 2036, 2037 to 2042, 2043 to 2048, 2049 to 2054, 2055 to 2060, 2061 to 2066, 2067 to 2072, 2073 to 2078, 2079 to 2084, 2085 to 2090, 2091 to 2096, 2097 to 2102, 2103 to 2108, 2109 to 2114, 2115 to 2120, 2121 to 2126, 2127 to 2132, 2133 to 2138, 2139 to 2144, 2145 to 2150, 2151 to 2156, 2157 to 2162, 2163 to 2168, 2169 to 2174, 2175 to 2180, 2181 to 2186, 2187 to 2192, 2193 to 2198, 2199 to 2204, 2205 to 2210, 2211 to 2216, 2217 to 2222, 2223 to 2228, 2229 to 2234, 2235 to 2240, 2241 to 2246, 2247 to 2252, 2253 to 2258, 2259 to 2264, 2265 to 2270, 2271 to 2276, 2277 to 2282, 2283 to 2288, 2289 to 2294, 2295 to 2300, 2301 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to 6158, 6159 to 6164, 6165 to 6170, 6171 to 6176, 6177 to 6182, 6183 to 6188, 6189 to 6194, 6195 to 6200, 6201 to 6206, 6207 to 6212, 6213 to 6218, 6219 to 6224, 6225 to 6230, 6231 to 6236, 6237 to 6242, 6243 to 6248, 6249 to 6254, 6255 to 6260, 6261 to 6266, 6267 to 6272, 6273 to 6278, 6279 to 6284, 6285 to 6290, 6291 to 6296, 6297 to 6302, 6303 to 6308, 6309 to 6314, 6315 to 6320, 6321 to 6326, 6327

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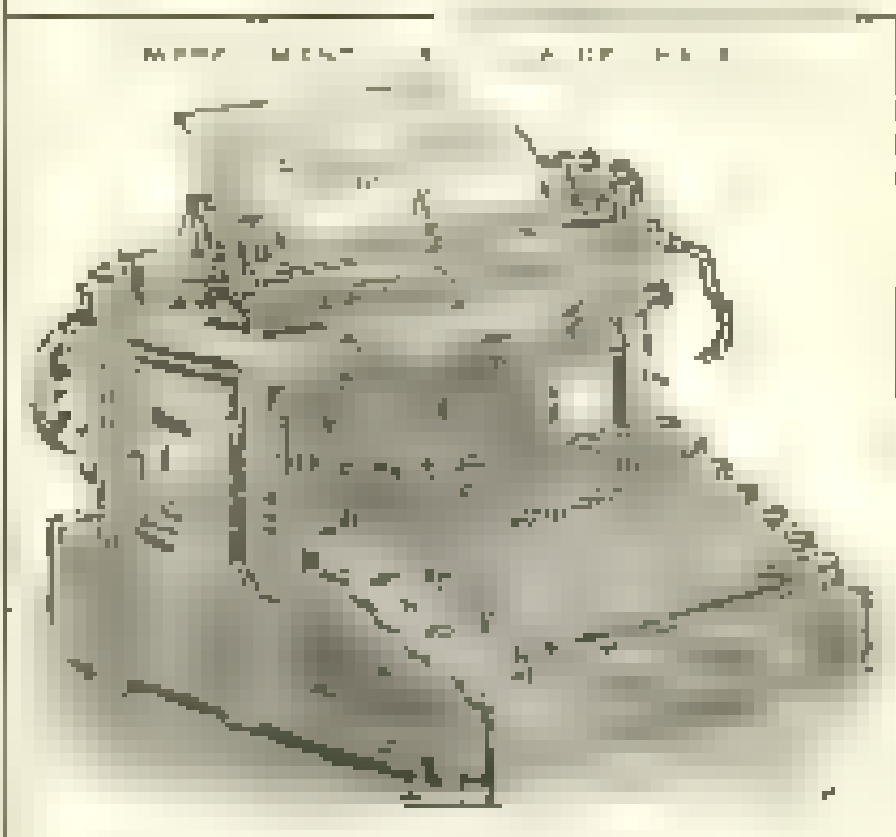
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